



USPTO

[Subscribe \(Full Service\)](#) [Register \(Limited Service, Free\)](#) [Login](#)

 Search: ☒ The ACM Digital Library ☐ The Guide

+setting +up +multimedia +call switched

SEARCH

[Home](#) [About](#) [FAQ](#) [Contact](#) [Privacy](#)

[Feedback](#) [Report a problem](#) [Satisfaction survey](#)
Terms used setting up multimedia call switched

Found 2,728 of 160,457

Sort results by

relevance

[Save results to a Binder](#)[Try an Advanced Search](#)[Try this search in The ACM Guide](#)

Display results

expanded form

[Search Tips](#)☐ Open results in a new window

Results 41 - 60 of 200

Result page: [previous](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [next](#)

Best 200 shown

Relevance scale ☐ ☐ ☐ ☐ ☐**41** [Report on the Workshop on Quality of Service Issues in High Speed Networks](#)

S. Keshav

October 1992 **ACM SIGCOMM Computer Communication Review**, Volume 22 Issue 5Full text available: [pdf\(1.28 MB\)](#)Additional Information: [full citation](#), [index terms](#)**42** [Design, implementation, and performance measurement of a native-mode ATM transport layer \(extended version\)](#)

R. Ahuja, S. Keshav, H. Saran

August 1996 **IEEE/ACM Transactions on Networking (TON)**, Volume 4 Issue 4Full text available: [pdf\(1.66 MB\)](#)Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)**Keywords:** AAL 5, asynchronous transfer mode, native-mode ATM, personal computer, transport layer**43** [Randomized protocols for low-congestion circuit routing in multistage interconnection networks](#)

Richard Cole, Bruce M. Maggs, Friedhelm Meyer auf der Heide, Michael Mitzenmacher, Andr ea W. Richa, Klaus Schr der, Ramesh K. Sitaraman, Berthold V cking

May 1998 **Proceedings of the thirtieth annual ACM symposium on Theory of computing**Full text available: [pdf\(1.73 MB\)](#)Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)**44** [Effects of clock resolution on the scheduling of interactive and soft real-time processes](#)

Yoav Etsion, Dan Tsafir, Dror G. Feitelson

June 2003 **ACM SIGMETRICS Performance Evaluation Review, Proceedings of the 2003 ACM SIGMETRICS international conference on Measurement and modeling of computer systems**, Volume 31 Issue 1Full text available: [pdf\(512.91 KB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

It is commonly agreed that scheduling mechanisms in general purpose operating systems

do not provide adequate support for modern interactive applications, notably multimedia applications. The common solution to this problem is to devise specialized scheduling mechanisms that take the specific needs of such applications into account. A much simpler alternative is to better tune existing systems. In particular, we show that conventional scheduling algorithms typically only have little and possibly ...

**Keywords:** Linux, clock interrupt rate, interactive process, overhead, scheduling, soft real-time, tuning

45 Network topology management in a mobile-switch ATM network: dynamic partition algorithms

Sheng-Tzong Cheng, C. Chen, C. Li, Chia-Mei Chen

March 2002 **International Journal of Network Management**, Volume 12 Issue 2

Full text available:  pdf(350.26 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

In this paper we propose two partition algorithms. The main policy of the algorithms is finding out the area(s) in which mobile switches congregate within a peer group.

46 Making distributed multimedia systems secure: the switchboard approach

Chris Zimmermann

January 1994 **ACM SIGOPS Operating Systems Review**, Volume 28 Issue 1

Full text available:  pdf(844.75 KB) Additional Information: [full citation](#), [abstract](#), [index terms](#)

The following paper describes a security scheme for a distributed multimedia environment called Switchboard. After a brief introduction to the philosophy of the Switchboard and the underlying system model, the main building blocks of the concept are described. These are: an authentication mechanism preventing intruder attacks and a protection scheme based on an extended access control matrix approach. This protection scheme covers both static and dynamic aspects of access protection for multimed ...

**Keywords:** distributed objects, distributed systems, multimedia systems, security

47 The design, implementation and evaluation of SMART: a scheduler for multimedia applications

Jason Nieh, Monica S. Lam

October 1997 **ACM SIGOPS Operating Systems Review, Proceedings of the sixteenth ACM symposium on Operating systems principles**, Volume 31 Issue 5

Full text available:  pdf(2.48 MB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

48 Network support for mobile multimedia using a self-adaptive distributed proxy

Zhuoqing Morley Mao, Hoi-sheung Wilson So, Byunghoon Kang

January 2001 **Proceedings of the 11th international workshop on Network and operating systems support for digital audio and video**

Full text available:  pdf(212.65 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Recent advancements in video and audio codec technologies~(e.g., RealV ideo [18] make multimedia streaming possible across a wide range of network conditions. With an increasing trend of ubiquitous connectivity, more and more areas have overlapping coverage of multiple wired and wireless networks. Because the best network service changes as the user moves, to provide good multimedia application performance, the service needs to adapt to user movement as well as network and computational res ...

**49 Crossover switch discovery for wireless ATM LANs**

Chai-Keong Toh

October 1996 **Mobile Networks and Applications**, Volume 1 Issue 2Full text available:  [pdf\(569.77 KB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

The emergence of Wireless Local Area Networks (WLANs) has brought about the possibility of mobile computing. In order to maintain connectivity to Mobile Hosts (MHs), a handover mechanism is needed as MHs migrate from one Base Station's (BS) wireless cell to another. Current handover schemes are mainly catered for connectionless WLANs (example Mobile IP) which do not have the ability to support Quality of Service (QoS) for continuous media traffic. Hence, mobility for connection-oriented WLA ...

**50 Intraprogram dynamic voltage scaling: Bounding opportunities with analytic modeling**

Fen Xie, Margaret Martonosi, Sharad Malik

September 2004 **ACM Transactions on Architecture and Code Optimization (TACO)**,

Volume 1 Issue 3

Full text available:  [pdf\(980.11 KB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Dynamic voltage scaling (DVS) has become an important dynamic power-management technique to save energy. DVS tunes the power-performance tradeoff to the needs of the application. The goal is to minimize energy consumption while meeting performance needs. Since CPU power consumption is strongly dependent on the supply voltage, DVS exploits the ability to control the power consumption by varying a processor's supply voltage and clock frequency. However, because of the energy and time overhead asso ...

**Keywords:** Analytical model, compiler, dynamic voltage scaling, low power, mixed-integer linear programming

**51 Modelling and performance evaluation of mobile multimedia systems using QoS-GSPN**

Tony Tsang

November 2003 **Wireless Networks**, Volume 9 Issue 6Full text available:  [pdf\(200.92 KB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Quality of Service (QoS) measurement of multimedia applications is one of the most important issues for call handoff and call admission control in mobile networks. Based on the QoS measures, we propose a Generalized Stochastic Petri Net (GSPN) based model, called QoS-GSPN, which can express the real-time behavior of QoS measurement for mobile networks. QoS-GSPN performance analysis methodology includes the formal expression and performance analysis environment. It offers the promise of providing ...

**Keywords:** QoS, QoS-GSPN, mobile system, multimedia system

**52 External memory algorithms and data structures: dealing with massive data**

Jeffrey Scott Vitter

June 2001 **ACM Computing Surveys (CSUR)**, Volume 33 Issue 2Full text available:  [pdf\(828.46 KB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)


Data sets in large applications are often too massive to fit completely inside the computers internal memory. The resulting input/output communication (or I/O) between fast internal memory and slower external memory (such as disks) can be a major performance bottleneck. In this article we survey the state of the art in the design and analysis of external memory (or EM) algorithms and data structures, where the goal is to exploit locality in order to reduce the I/O costs. We consider a varie ...

**Keywords:** B-tree, I/O, batched, block, disk, dynamic, extendible hashing, external memory, hierarchical memory, multidimensional access methods, multilevel memory, online, out-of-core, secondary storage, sorting

53 Exponential bounds with applications to call admission

Zhen Liu, Philippe Nain, Don Towsley

May 1997 **Journal of the ACM (JACM)**, Volume 44 Issue 3

Full text available:  [pdf\(543.12 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#), [review](#)

In this paper, we develop a framework for computing upper and lower bounds of an exponential form for a large class of single resource systems with Markov additive inputs. Specifically, the bounds are on quantities such as backlog, queue length, and response time. Explicit or computable expressions for our bounds are given in the context of queuing theory and numerical comparisons with other bounds and exact results are presented. The paper concludes with two applications to admission contr ...

**Keywords:** Markov additive process, Markov chain, call admission control, effective bandwidth, ergodicity, exponential bound, large deviation principle, matrix analysis, queues, tail distribution

54 Xunet 2: lessons from an early wide-area ATM testbed

Charles R. Kalmanek, Srinivasan Keshav, William T. Marshall, Samuel P. Morgan, Robert C. Restrick

February 1997 **IEEE/ACM Transactions on Networking (TON)**, Volume 5 Issue 1

Full text available:  [pdf\(231.69 KB\)](#) Additional Information: [full citation](#), [references](#), [index terms](#)

**Keywords:** asynchronous transfer mode, available bit rate, constant bit rate, variable bit rate

55 Connection establishment in high-speed networks

Israel Cidon, Inder S. Gopal, Adrian Segall

August 1993 **IEEE/ACM Transactions on Networking (TON)**, Volume 1 Issue 4

Full text available:  [pdf\(1.44 MB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

56 Evolutionary engagement in an ongoing collaborative work process: a case study

Thomas P. Moran, Patrick Chiu, Steve Harrison, Gordon Kurtenbach, Scott Minneman, William van Melle

November 1996 **Proceedings of the 1996 ACM conference on Computer supported cooperative work**

Full text available:  [pdf\(1.35 MB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

**Keywords:** LiveBoard, activity capture, audio recording, co-development, evolutionary engagement, meeting support tools, notetaking, salvaging, work process support

**57** Speech and audio in window systems: when will they happen?

B. Arons, C. Schmandt, M. Hawley, H. Ludwig, P. Zellweger

July 1989 **ACM SIGGRAPH Computer Graphics , ACM SIGGRAPH 89 Panel Proceedings**,  
Volume 23 Issue 5Full text available:  pdf(2.78 MB) Additional Information: [full citation](#), [abstract](#), [index terms](#)

Good afternoon. Boy, I can't see anything out there. I assume you all can see me -- that's why these lights are here. My name is Chris Schmandt from the Media Lab at MIT. I'm co-chairing this panel with Barry Arons, who is sitting over here. It's actually quite a pleasure to co-chair this panel with Barry. We've been working together off and on for more years than I care to remember.

This panel has a long ridiculous name. Basically it's about audio and window systems and work ...

**58** "I'll get that off the audio": a case study of salvaging multimedia meeting records


Thomas P. Moran, Leysia Palen, Steve Harrison, Patrick Chiu, Don Kimber, Scott Minneman, William van Melle, Polle Zellweger

March 1997 **Proceedings of the SIGCHI conference on Human factors in computing systems**Full text available:  pdf(1.17 MB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

**Keywords:** LiveBoard, activity capture, audio recording, meeting support tools, multimedia, notetaking, salvaging, work process support

**59** On per-session end-to-end delay distributions and the call admission problem for real-time applications with QOS requirements

David Yates, James Kurose, Don Towsley, Michael G. Hluchyj

October 1993 **ACM SIGCOMM Computer Communication Review , Conference proceedings on Communications architectures, protocols and applications**, Volume 23 Issue 4Full text available:  pdf(1.06 MB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

A crucial problem facing the designers and deployers of future high-speed networks is providing applications with quality of service (QOS) guarantees. For soft real-time applications, which are delay sensitive but loss tolerant, delay distribution is an important QOS measure of interest. In this paper we study (through simulation) the end-to-end delay distribution seen by individual sessions under simple first-come first-served (FCFS) multiplexing in a network model with two significant features ...

**60** Statistical performance guarantees in large-scale cross-path packet switch

Man Chi Chan, Tony T. Lee

April 2003 **IEEE/ACM Transactions on Networking (TON)**, Volume 11 Issue 2Full text available:  pdf(925.69 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#), [review](#)

In this paper, we develop a general framework for a novel switch architecture, the cross-path switch, to provide per-session statistical quality of service (QoS) guarantees. With characterizing the service each session receives by service curves, we derive a set of statistical bounds on the delay, backlog, and departure processes at the switch on a per-session manner using exponential bounded burstiness processes as source session traffic models. These bounds show that the service guarantees offered ...

**Keywords:** clos network, cross-path switch, exponential bounded burstiness (EBB) processes, path switching, quality of service (QoS), semioptical network, service curves, statistical performance guarantees, token assignment algorithm

Results 41 - 60 of 200

Result page: [previous](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [next](#)

The ACM Portal is published by the Association for Computing Machinery. Copyright © 2005 ACM, Inc.

[Terms of Usage](#) [Privacy Policy](#) [Code of Ethics](#) [Contact Us](#)

Useful downloads:  [Adobe Acrobat](#)  [QuickTime](#)  [Windows Media Player](#)  [Real Player](#)


[Home](#) | [Login](#) | [Logout](#) | [Access Information](#) | [Alerts](#) |

Welcome United States Patent and Trademark Office

☐ Search Results

BROWSE

SEARCH

IEEE XPLORE GUIDE

Results for "( edge switch&lt;in&gt;metadata ) &lt;and&gt; ( circuit&lt;in&gt;metadata ) &lt;and&gt; ( packet&lt;in&gt;metadata )"

e-mail

Your search matched 1 of 1227909 documents.

A maximum of 100 results are displayed, 25 to a page, sorted by **Relevance** in **Descending** order.

» Search Options

[View Session History](#)[New Search](#)

Modify Search


☐ Check to search only within this results set
Display Format: ☒ Citation ☐ Citation & Abstract

» Key

IEEE JNL IEEE Journal or Magazine

IEE JNL IEE Journal or Magazine

IEEE CNF IEEE Conference Proceeding

IEE CNF IEE Conference Proceeding

IEEE STD IEEE Standard

- ☐ 1. **QoS performance in IP over PetaWeb optical network**  
 Aimin Huang; Tingzhou Yang; Kabranov, O.; Makrakis, D.;  
 Communications, Circuits and Systems and West Sino Expositions, IEEE 2002  
 Conference on  
 Volume 1, 29 June-1 July 2002 Page(s):664 - 668 vol.1  
[AbstractPlus](#) | Full Text: [PDF\(434 KB\)](#) IEEE CNF

 Indexed by  
[Help](#) [Contact Us](#) [Privacy & ;](#)

© Copyright 2005 IEEE -


[Subscribe \(Full Service\)](#) [Register \(Limited Service, Free\)](#) [Login](#)

 Search: ☒ The ACM Digital Library ☐ The Guide



THE ACM DIGITAL LIBRARY

 [Report a problem](#) [Satisfaction survey](#)

 Terms used **edge switch multimedia**

Found 7,919 of 160,457

Sort results by

☒ [Save results to a Binder](#)

 Try an [Advanced Search](#)

Display results

☒ [Search Tips](#)

 Try this search in [The ACM Guide](#)
☐ [Open results in a new window](#)

Results 1 - 20 of 200

 Result page: [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [next](#)

Best 200 shown

 Relevance scale ☐ ☐ ☐ ☐ ☐

### 1 [Data and Content: MarconiNet supporting streaming media over localized wireless multicast](#)

 Ashutosh Dutta, Subir Das, Wai Chen, Anthony McAuley, Henning Schulzrinne, Onur Altintas  
 September 2002 **Proceedings of the 2nd international workshop on Mobile commerce**

 Full text available: ☒ pdf(464.72 KB)

 Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Flexible multi-media streaming such as advertisement insertion, location based services, mobility and wireless access are vital components that make existing Internet Radio and TV networks more attractive for the roaming users. All of these applications also provide added value to telematics, and military usage including coordination, education, situation awareness, distributed simulation, battlefield communication and multi-player games. While content distribution over a wired network can be rea ...

**Keywords:** join/leave latency, marconinet, multicast, streaming

### 2 [Energy efficient address assignment through minimized memory row switching](#)

Sambuddhi Hettiaratchi, Peter Y. K. Cheung, Thomas J. W. Clarke  
 November 2002 **Proceedings of the 2002 IEEE/ACM international conference on Computer-aided design**

 Full text available: ☒ pdf(88.25 KB)

 Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Data transfer intensive applications consume a significant amount of energy in memory access. The selection of a memory location from a memory array involves driving row and column select lines. A signal transition on a row select line often consumes significantly more energy than a transition on a column select line. In order to exploit this difference in energy consumption of row and column select lines, we propose a novel address assignment methodology that aims to minimize high energy row tr ...

**Keywords:** address assignment, data layout, memory synthesis

### 3 [Half layers: On demand label switching for spontaneous edge networks](#)

Vincent Untz, Martin Heusse, Franck Rousseau, Andrzej Duda  
 August 2004 **Proceedings of the ACM SIGCOMM workshop on Future directions in network architecture**



Full text available:  pdf(267.58 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

We consider the problem of interconnecting hosts in spontaneous edge networks composed of various types of wired or wireless physical and link layer technologies. All or some hosts in a spontaneous network can be organized as a multi-hop ad hoc network, connected or not to the global Internet. We argue that this kind of networks requires a more sophisticated approach than standard IP forwarding: communication paths should be managed on a per flow basis, multiple paths need to be maintained to co ...

**Keywords:** MPLS, ad-hoc networks, autoconfiguration, spontaneous networks

4 [Universal  \$O\(\text{congestion} + \text{dilation} + \log 1 + \epsilon; N\)\$  local control packet switching algorithms](#)

Rafail Ostrovsky, Yuval Rabani

May 1997 **Proceedings of the twenty-ninth annual ACM symposium on Theory of computing**

Full text available:  pdf(1.64 MB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

5 [The transport layer: tutorial and survey](#)

Sami Iren, Paul D. Amer, Phillip T. Conrad

December 1999 **ACM Computing Surveys (CSUR)**, Volume 31 Issue 4

Full text available:  pdf(261.78 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Transport layer protocols provide for end-to-end communication between two or more hosts. This paper presents a tutorial on transport layer concepts and terminology, and a survey of transport layer services and protocols. The transport layer protocol TCP is used as a reference point, and compared and contrasted with nineteen other protocols designed over the past two decades. The service and protocol features of twelve of the most important protocols are summarized in both text and tables. < ...

**Keywords:** TCP/IP networks, congestion control, flow control, transport protocol, transport service

6 [Quality of service provision in noncooperative networks: heterogeneous preferences, multi-dimensional QoS vectors, and burstiness](#)

Kihong Park, Meera Sitharam, Shaogang Chen

October 1998 **Proceedings of the first international conference on Information and computation economies**

Full text available:  pdf(1.98 MB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

7 [Intraprogram dynamic voltage scaling: Bounding opportunities with analytic modeling](#)

Fen Xie, Margaret Martonosi, Sharad Malik

September 2004 **ACM Transactions on Architecture and Code Optimization (TACO)**, Volume 1 Issue 3

Full text available:  pdf(980.11 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Dynamic voltage scaling (DVS) has become an important dynamic power-management technique to save energy. DVS tunes the power-performance tradeoff to the needs of the application. The goal is to minimize energy consumption while meeting performance needs. Since CPU power consumption is strongly dependent on the supply voltage, DVS exploits

the ability to control the power consumption by varying a processor's supply voltage and clock frequency. However, because of the energy and time overhead asso ...

**Keywords:** Analytical model, compiler, dynamic voltage scaling, low power, mixed-integer linear programming

# 8 A survey of routing techniques for mobile communications networks

S. Ramanathan, Martha Steenstrup

October 1996 **Mobile Networks and Applications**, Volume 1 Issue 2

Full text available:  pdf(276.88 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Mobile wireless networks pose interesting challenges for routing system design. To produce feasible routes in a mobile wireless network, a routing system must be able to accommodate roving users, changing network topology, and fluctuating link quality. We discuss the impact of node mobility and wireless communication on routing system design, and we survey the set of techniques employed in or proposed for routing in mobile wireless networks.

# 9 Technical poster session 2: multimedia networking and system support: Application of packet assembly technology to digital video and VoIP

Toshikatsu Kanda, Kazunori Shimamura

October 2004 **Proceedings of the 12th annual ACM international conference on Multimedia**

Full text available:  pdf(374.66 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

The Internet is composed of many kinds of networks and the networks are composed of network nodes such as routers. Routers use processor power for forwarding each packet with any size. At that time, node processor would be a bottleneck in respect to the high throughput if there would be too many packets to forward. Then, authors propose the packet assembly method. This aims to decrease the number of packets for the reduction of processor load, based on the fact that there are many packets muc ...

**Keywords:** load reduction, packet assembly, performance improvement

# 10 Processor-memory coexploration using an architecture description language

Prabhat Mishra, Mahesh Mamidipaka, Nikil Dutt

February 2004 **ACM Transactions on Embedded Computing Systems (TECS)**, Volume 3 Issue 1

Full text available:  pdf(201.88 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Memory represents a major bottleneck in modern embedded systems in terms of cost, power, and performance. Traditionally, memory organizations for programmable embedded systems assume a fixed cache hierarchy. With the widening processor-memory gap, more aggressive memory technologies and organizations have appeared, allowing customization of a heterogeneous memory architecture tuned for specific target applications. However, such a processor-memory coexploration approach critically needs the ab ...

**Keywords:** Processor-memory codesign, architecture description language, design space exploration, memory exploration

# 11

Performance, reliability, and quality of service: Packet-late indication based (PLIB): adaptive jitter buffer

Liu Erwu, Jin Shan, Lin Changsheng, Shen Gang, Zhang Kaibin, Gui Luoning  
January 2004 **Proceedings of the winter international symposium on Information and communication technologies WISICT '04**

Full text available:  [pdf\(298.13 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#)

Adaptive jitter buffer are being increasingly used in TDM over packet switching networks (TDMoPSN). This paper proposes a simple adaptive jitter buffer adjustment algorithm for efficient jitter absorption. We verify by simulations that the proposed algorithm can absorb and track jitter effectively while guarantee ordered packet delivery even under networks with delay spikes.

**Keywords:** TDMoPSN, adaptive jitter buffer, delay spike

12 PAMAS—power aware multi-access protocol with signalling for ad hoc networks

Suresh Singh, C. S. Raghavendra

July 1998 **ACM SIGCOMM Computer Communication Review**, Volume 28 Issue 3

Full text available:  [pdf\(1.84 MB\)](#) Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)

In this paper we develop a new multiaccess protocol for ad hoc radio networks. The protocol is based on the original MACA protocol with the addition of a separate signalling channel. The unique feature of our protocol is that it conserves battery power at nodes by intelligently powering off nodes that are not actively transmitting or receiving packets. The manner in which nodes power themselves off does not influence the delay or throughput characteristics of our protocol. We illustrate the power ...

13 Mesh Partitioning Approach to Energy Efficient Data Layout

Sambuddhi Hettiaratchi, Peter Y. K. Cheung

March 2003 **Proceedings of the conference on Design, Automation and Test in Europe - Volume 1 DATE '03**

Full text available:  [pdf\(153.63 KB\)](#) Additional Information: [full citation](#), [abstract](#), [index terms](#)  
 [Publisher Site](#)

Memory access consumes a significant amount of energy in data transfer intensive applications. The selection of a memory location from a CMOS memory cell array involves driving row and column select lines. A switching event on a row select line often consumes significantly more energy in comparison to a switching event on a column select line. In order to exploit this difference in energy consumption of row and column select lines, we propose a novel data layout method that aims to minimize row ...

14 Multimedia presentation database system

Binjia Jiao

October 2000 **Proceedings of the eighth ACM international conference on Multimedia**

Full text available:  [pdf\(192.81 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)


Multimedia presentations are increasingly being used in most spheres of life. Viewing these multimedia presentation as databases help in querying as well as re-using parts of existing presentations to create new ones. This dissertation proposes on object-oriented model for managing multimedia presentations as (temporal) databases based on the web. And the dissertation also discusses the representation of the proposed object-oriented model in Extensible Markup Language (XML). This represent ...

**Keywords:** XML, authoring, multimedia presentation, querying

15 Compile-time dynamic voltage scaling settings: opportunities and limits

Fen Xie, Margaret Martonosi, Sharad Malik

May 2003 **ACM SIGPLAN Notices , Proceedings of the ACM SIGPLAN 2003 conference on Programming language design and implementation**, Volume 38 Issue 5

Full text available:  [pdf\(291.26 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

With power-related concerns becoming dominant aspects of hardware and software design, significant research effort has been devoted towards system power minimization. Among run-time power-management techniques, dynamic voltage scaling (DVS) has emerged as an important approach, with the ability to provide significant power savings. DVS exploits the ability to control the power consumption by varying a processor's supply voltage (V) and clock frequency (f). DVS controls energy by scheduling diffe ...

**Keywords:** analytical model, compiler, dynamic voltage scaling, low power, mixed-integer linear programming

#### 16 Redundant trees for preplanned recovery in arbitrary vertex-redundant or edge-redundant graphs

Muriel Médard, Steven G. Finn, Richard A. Barry

October 1999 **IEEE/ACM Transactions on Networking (TON)**, Volume 7 Issue 5

Full text available:  [pdf\(251.44 KB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

**Keywords:** graph theory, multicasting, network recovery, network robustness, routing, trees

#### 17 Session 2: Beyond technology: the missing pieces for QoS success

L. Burgstahler, K. Dolzer, C. Hauser, J. Jähnert, S. Junghans, C. Macián, W. Payer

August 2003 **Proceedings of the ACM SIGCOMM workshop on Revisiting IP QoS: What have we learned, why do we care?**

Full text available:  [pdf\(207.99 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)


Years of research on QoS architectures for IP networks have delivered sophisticated proposals, which have nevertheless not found broad commercial use. The reasons are not lack of technical soundness or insurmountable technological complexity, but insufficient attention to other, non-QoS-specific matters. First among them is the lack of a commercialization model for the Internet together with the necessary accounting and charging architecture. Another crucial issue is the assurance of end-to-end ...

**Keywords:** Internetworking, Next Generation Internet, QoS

#### 18 Stream communication between real-time tasks in a high-performance multiprocessor

J. A. J. Leijten, J. L. van Meerbergen, A. H. Timmer, J. A. G. Jess

February 1998 **Proceedings of the conference on Design, automation and test in Europe**

Full text available:  [pdf\(117.38 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)  
 [Publisher Site](#)

The demands in terms of processing performance, communication bandwidth and real-time throughput of many multimedia applications are much higher than today's processing architectures can deliver. The Prophid heterogeneous multiprocessor architecture template aims to bridge this gap. The template contains a general purpose processor connected to a central bus, as well as several high-performance application domain specific processors. A high-throughput communication network is used to meet the hi ...